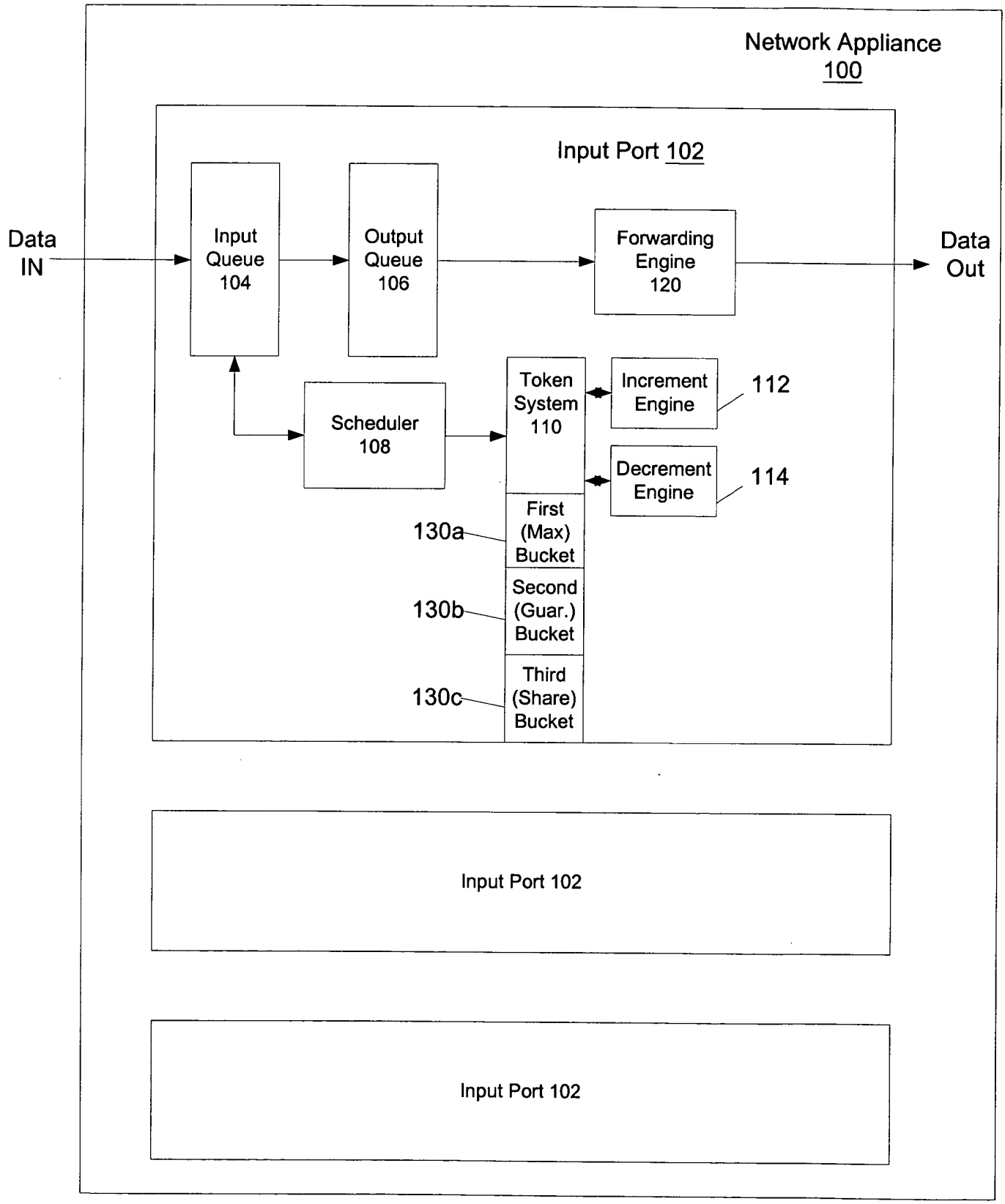
Network Appliance
100
Input Port 102
Data
IN
Input
Queue
104
Output
Queue
106
Forwarding
Engine
120
Data
Out
Token
System
110
Increment
Engine
112
Scheduler
108
Decrement
Engine
114
First
(Max)
Bucket
130a
Second
(Guar.)
Bucket
130b
Third
(Share)
Bucket
130c
Input Port 102
Input Port 102

Figure 1

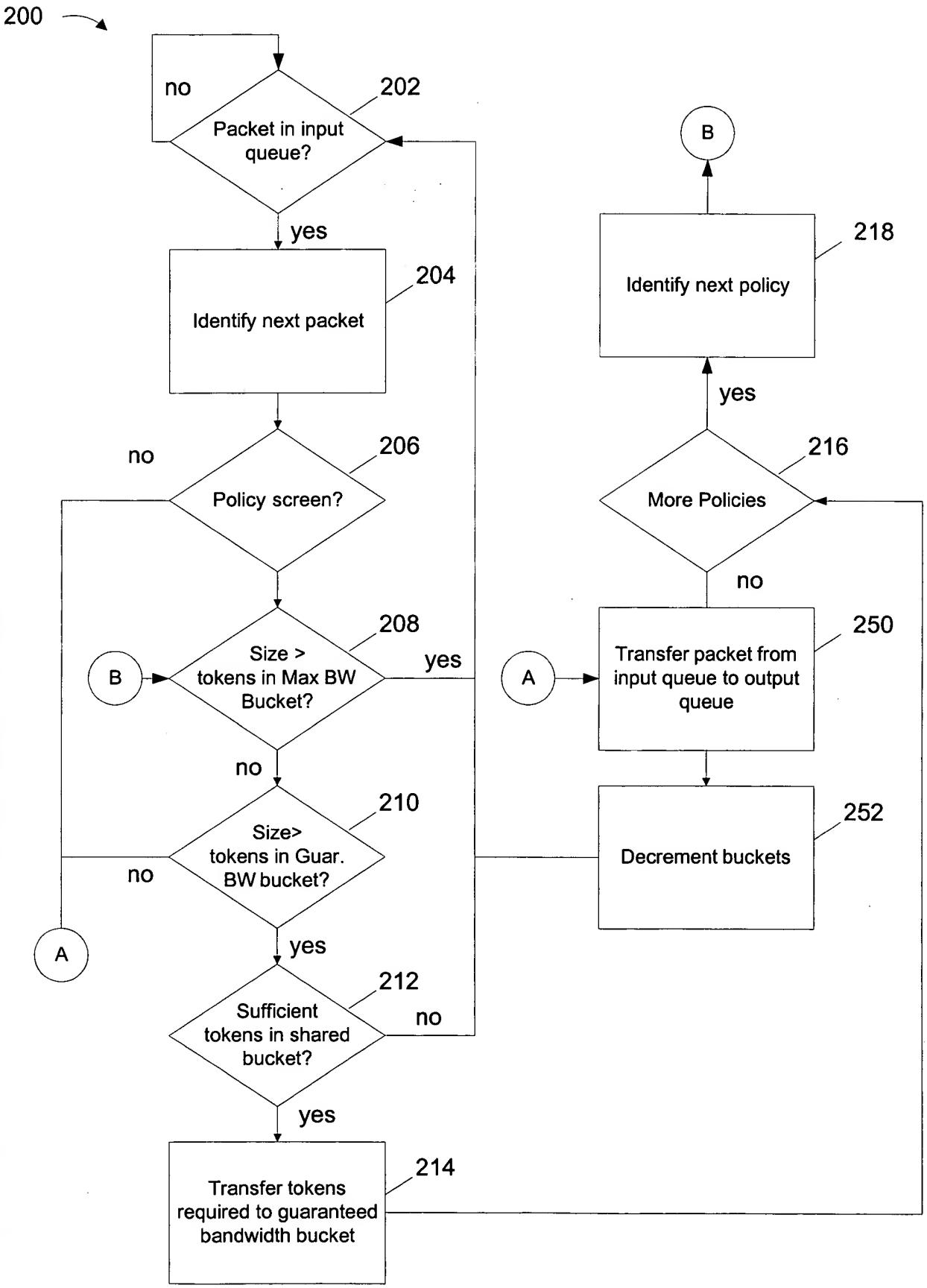
200
Packet in input queue?
202
no
yes
Identify next packet
204
Policy screen?
206
no
Size > tokens in Max BW Bucket?
208
yes
no
B
Size> tokens in Guar. BW bucket?
210
no
yes
A
Sufficient tokens in shared bucket?
212
no
yes
Transfer tokens required to guaranteed bandwidth bucket
214
More Policies
216
yes
no
Identify next policy
218
B
Transfer packet from input queue to output queue
250
A
Decrement buckets
252

Figure 2

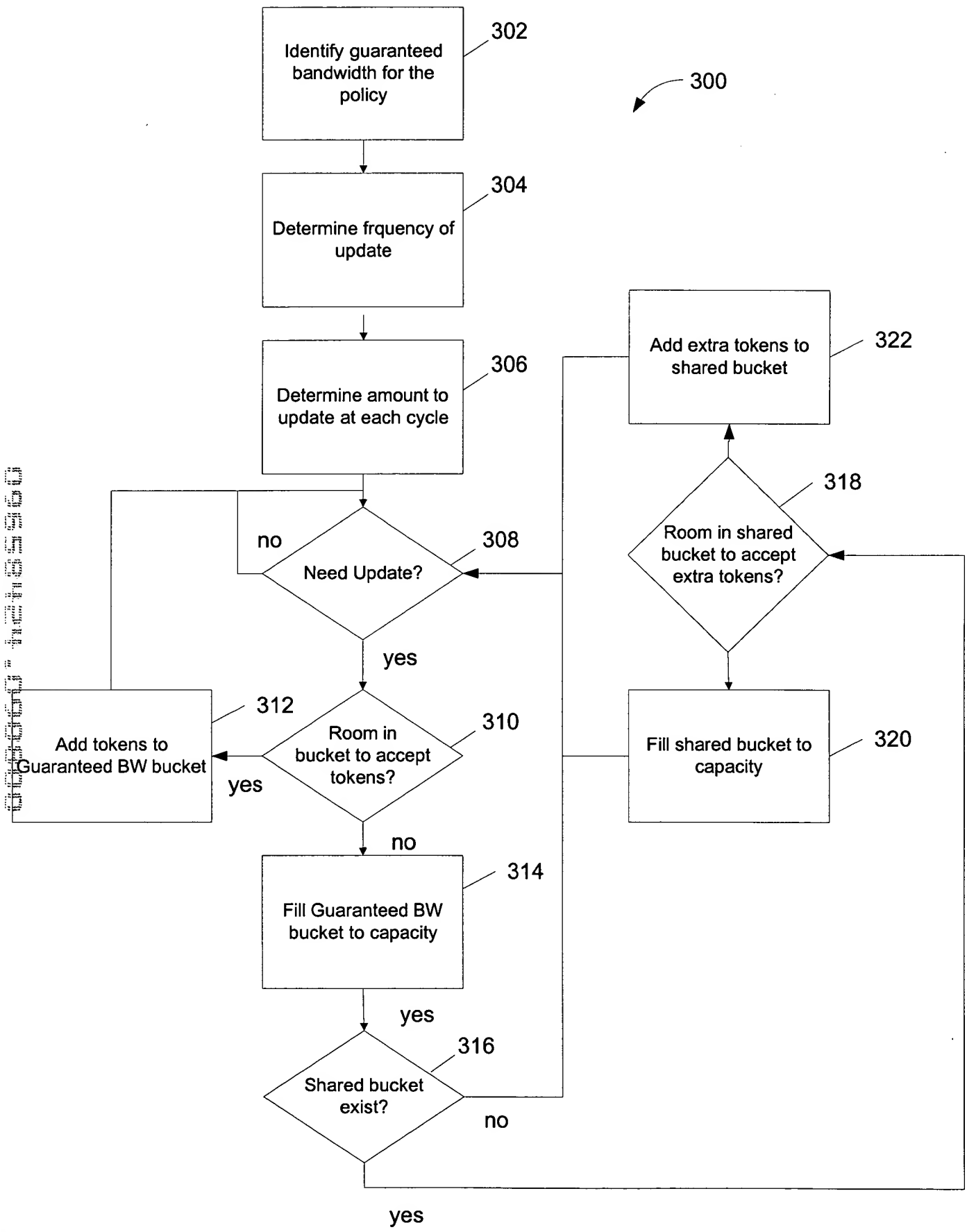
Identify guaranteed bandwidth for the policy
302
300
Determine frquency of update
304
Determine amount to update at each cycle
306
Add extra tokens to shared bucket
322
318
Room in shared bucket to accept extra tokens?
no
Need Update?
308
yes
Add tokens to Guaranteed BW bucket
312
Room in bucket to accept tokens?
310
Fill shared bucket to capacity
320
yes
no
Fill Guaranteed BW bucket to capacity
314
yes
316
Shared bucket exist?
no
yes

Figure 3